ISSN 0112-3351

BEEBLET

CONTENTS

→ Acorns New Master Micro 2
Nusery Rhymes for Micro Babies 11
Build your own Database Manager 12
Digitising Service (Ad.) 14
HELP 18
Excuses and Apologies 21
Snide Remark 24
Beginner's Column 25
A Letter 31
Dunedin Report 31
Buy, Sell, Exchange 33
DFS made Easy 35
Garfield 37
Jottings 38
Service Agents and Dealers 39
Local Groups 40

SCOOP !

VOLUME 4 NUMBER 8 SEPTEMBER 1986

BBC / ACORN

COMPUTER USER GROUP NZ (inc)

ACORNS NEW MASTER MICRO– the Master Compact

Bruce Smith – Technical Editor, Acorn User

This article has been very generously supplied to our User Group by Bruce Smith of Acorn User. You will have to wait for Acorn User in a month or three for the final version, including photos and diagrams.

After all the months of rumours and speculation, the Baby B, or the Master Compact 128 to give it its proper title, is here. And it looks very good indeed.
The machine will immediately raise comparisons with Acorn's own Electron and of course with Amstrad's computers, but we'll come to those in a minute.

First, what is the Compact? Acorn has taken the guts of the £499 (inc VAT) Master 128 and cut out all the expensive non-essential interfaces, which although they give the BBC micro and Master great flexibility, are not used by most users in the home. The keyboard is now about half the size of the Master or BBC and a disc drive is fitted into a box with the power supply. So for £399 you get the keyboard plus disc box; for £50 more you get a monochrome monitor and for £499 you get a medium resolution (Philips) colour monitor. Notice that these price exclude VAT -- you can blame that of the success of Amstrad.

The theory of all this is similar to that of the Electron. However, the Electron not only lost all the interfacing, but also the software compatibility and speed. And it never came out on time. The Compact appears to have hit on a good compromise -- the power of the Master but equivalent to £200 cheaper. It has all the interfaces needed in the home and by small businesses, all the software compatibility (apart from the disc medium), and Acorn appears to have set up stockpiles for the launch. As long as Acorn gets the advertising and distribution right there should be no problem selling it.

And what about the Amstrad? The Compact doesn't come with a printer, but then it's more than a wordprocessor. It comes with the View wordprocessor built in, but it also has Logo for teaching and a children's wordprocessor. And that's the key to Acorn's strategy, to sell it to parents who see a need to teach their children about computers. The Amstrads can't do that.

What are the disadvantages? First, it comes with 3.5in disc drives. These are the coming thing, but there isn't much software around on them yet -- although Acorn has persuaded companies to back the machine with 100 titles available from the launch. Next, it doesn't have a User Port, 1MHz bus, analogue port or RS232 fitted. But don't despair, the analogue port and user Port have been chopped down to become a joystick/mouse interface, with an 'Atari-type' connector. And the RS23 can be fitted (it's just 4 chips) to take a modem. An Econet socket is also there, but a Master interface must be fitted. The actual sockets are fitted, but blanked off with a piece of plastic. If you want a proper 1MHz bus/User/Analogue port, then you'll have to buy a Master.

Also, the Compact doesn't have sockets for either internal co-processors or external second processors. This means it can't be upgraded to the power of the Master Turbo or the 512 with its IBM compatibility.

The Compact will give the whole BBC market a much-needed boost, if only because it should get BBC software back into the major retailers and put the name in front of the computer industry. It might well help the Electron particularly 3.5in drives were used in the Electron Plus 3 disc drive add-on.

One of the most fascinating things about the Compact is going to happen across Europe, in Italy. Because Olivetti is to launch the machine as one of its own called the Prodest. Italy is some way behind the UK in micro penetration (they're mostly Commodores over there apparently) so with Olivetti behind it, the machine should do great things for Acorn's bank balance. Could Olivetti sell more than Acorn? That will be interesting to see.

The machines will be built in England by Rank Xerox in Hertfordshire initially.

Acorn's target is the home market. Not a strict games market, but following on Acorn's success in education, while putting the Amstrad side of business into the nation's front rooms as well. The BBC micro sold there, but the Master was too expensive. This is Acorn's way of putting that right.

Over a hundred software titles were set for distribution on 3.5in disc format when the Compact was launched. Acornsoft and Superior have got together and jointly launched about ten games, with more to come including Elite and Repton 3.

There are two Acornsoft compilations, with four games on each.

Other publishers fired up for the launch include BBC Soft, Tynesoft, Micro Power, Kosmos, 4Mation, Fernleaf, Medstat, AMS, Clares and Computer Concepts.

Acorn has prepared a booklet outlining the software range. Topic areas covered include games, education, utilities, languages and business applications. The list includes some hardware such as mice, and musical keyboards from Mupados. Copies of the list are available from Dept 3P, Acorn, 645 Newmarket Rd, Cambridge CB5 8PD.

The Master Compact is supplied in two boxes (three if your've ordered a monitor) which are connected together as follows:
Keyboard and main printed circuit board containing microprocessor, ROM, RAM, specialist chips and sockets and ports.
Disc drive - a 3.5 inch drive running under ADFS and connected to the keyboard by a length of ribbon cable. The box also contains the Compact's power supply unit with mains switch on rear. A single 3 pin plug supplies mains power and avoids the spaghetti that most of us have been bought up to believe is a must for any good computer system! Acorn anticipate offering a second disc drive as an upgrade, no price is available at present but it will probably be in excess of £100.
The disc box also acts as a monitor stnadard for either a TV, monochrome or RGB monitor.
Monochrome monitor (£469) or RGB Monitor with sound output (£499).

The Keyboard

For the Compact, Acorn have dispensed with the traditional BBC computer keyboard with switches underneath the keys and gone for a rubber-plastic moulding membrane. This is not quite as awful as it sounds - in fact I personally prefer it to the keyboard supplied with the Master 128 for feel - though both are far inferior to the old BBC keyboard. The key layout is as for a Master 128 including numeric keypad.

The keyboard is housed in a rather tasteful case which is not dissimilar to that used for the Communicator. Directly underneath the keyboard is the main printed circuit board (PCB) housing all the computer's circuitry.

The Main Board

Although essentially a cut down Master 128, the main printed circuit board of the Master Compact has been completely re-designed. The chip count has been kept down to just 41 and the board is spacious.

The processor is a 65SC12 - the same as on a standard Master 128. 128K RAM is permanently supplied arranged as 64K main RAM and 64K sideways RAM. A notable difference is that this sideways RAM is permanently available and cannot be masked out with extra ROM slots by setting links as on a standard Master 128.

A 50 way expansion connector protrudes from the right hand side of the keyboard case. The edge connector is similar in terms of pin order and signals to cartridge socket 3 on a Master 128. Thus it is theoretically possible to add external sideways ROM or RAM expansion. Paged ROMs would be mapped as sockets 0 and 1.

Many of the standard Master CMOS gate array chips are in place, including the memory controller, the cathode ray tube controller multiplexer, the keyboard controller and the Chroma chip.

The right-hand side of the board is flanked by 5 sockets, the bottom of which is the 64K ROM containing the Compact's firmware. This socket does have a 128K capability selectable via a standard link. ROM slots &9 to &F appear in the 64K ROM though ROM slots &D and &F are mirrored in &9 and &B unless 128K ROM is fitted.

The four sockets above are free for ROMs and EPROMs, the upper three being 16K capacity and the fourth 32K. These appear as ROM slots 0/1, 2, 3 and 8. Sideways RAM appears in slots 4 to 7. Slot &C is not used.

There is no real-time battery backed clock with the Compact. Status and configuration bytes are implemented however by the use of an EE-ROM chip. This small device contains 128 bytes which are written to and erased electronically.

Disc control is provided by the 1772 chip - this is a slightly faster version of the 1770 chip which Acorn supplies with the Master 128 (though later machines are fitted with a 1772).

Expansion

The rear of the board houses all the standard ports for the Compact for use with printers, disc drive etc. The ports are non-standard compared to previous BBC machines - however this is not a ruse on Acorn's behalf but intelligent foresight to allow the Compact to comply with possible new radio frequency interference requirements.

No hardware provision is made to support either a cassette interface or a TV UHF output, though an external colour matrix / modulator can be attached to the video socket.

There is no hardware support for the standard Master analogue port however a digital (Atari style) joystick may be connected via the joystick port on the rear of the case. The MOS firmware converts the joystick output into suitable ADVALs to allow emulation of a standard BBC joystick operation.

The serial port is an optional extra. Upgrade to the RS232 port is performed simply by the insertion of 4 chips and pushing out the rear socket cover to expose the serial port socket. No hardware provision of any kind is made to support a modem upgrade.

A standard Centronics printer can be attached via a 24 way Delta socket - printers leads are therefore not directly interchangable between BBC-Master and Compact, though small adapting leads can be fabricated if so desired.

Provision is also made for the installation of an Econet board internally - fitting to the rear right of the main PCB and insertion of the ANFS ROM.

Second or co-processor expansion is not possible nor is access to the 1MHz bus hardware and software support being removed from the Compact. There is no provision for a User Port though some lines from the User 6522 VIA are present on the joystick port including the light pen strobe input (LPSTB) line.

Hardware Key

1 65C12 micro processor
2 MOS - 64K
3 32K ROM socket
4 16K ROM sockets (*3)
5 Customised gate array chips (*4)

6 Video processor
7 6845 Cathode Ray Tube Controller
8 128K RAM (4*32K chips)
9 Teletext chip
10 User 6522 VIA
11 System 6522 VIA
12 1772 Disc Controller Chip
13 EE-ROM
14 Keyboard Connector
15 Econet board connector (*2)
16 Serial Uart (upgrade chip)
17 Serial upgrade chip
18 RS232 driver/receiver chip (serial upgrade)
19 Serial upgrade chip
20 Speaker
21 5V power supply input
22 Disc connector
23 Printer connector
24 Joystick port
25 Econet socket
26 RS232 socket
27 Video output
28 RGB socket
29 Expansion connector

Master Compact Software

The 64K ROM

The 64K ROM contains a 32K machine operating system (MOS version 5), version 4 of Basic and version 2.0 of the Advanced Disc Filing System (ADFS). Typing *ROMS shows that these are ROMs F, E and D which show up as UTILS, Basic and ADFS on the ROM list.

The Master 128 MOS has had to be pruned down from 35K to allow it to fit into the 32K available to it. This has been done by cutting out code responsible for handling of input/output (I/O), Tube, and other hardware now not present. Sideways RAM commands such as *SRLOAD, *SRWRITE etc which previously lived in the DFS ROM have been re-housed in the new slim-line MOS.

ADFS version 2.0 is the same as earlier releases with the addition of format, verify and backup commands now in ROM. To allow for this, the Winchester handling code has had to be removed - but as the Compact has no 1MHz bus, a Winchester hard disc cannot be accomodated anyway.

Basic 4 is the same as that supplied with the Master 128.

View/Logo/ABC

Acornsoft's View wordprocessor and Logotron's Logo are supplied on the Welcome disc in the form of ROM images which can be loaded into a bank of sideways RAM and used as normal. View is version 3.2 and is supplied with its own printer driver which is installed automatically.

The choice of Logotron Logo in preference to Acornsoft's own logo may raise a few eyebrows, however it should be remembered that the Acornsoft Logo is geared very largely to driving turtles which is beyond the capability of the Compact.

The award winning child's wordprocessor ABC is also supplied on the Welcome disc, along with a program which will convert ABC text files into View format.

The Welcome Disc

Acorn provides a very nice front end to the Compact. This is supplied as icon-driven software on the Welcome disc. When the Welcome disc is run you find yourself in a desktop enviroment from which you can move a pointer to select applications software, games, tutorials, utilities or graphic displays. Selections are made by moving a pointer to the named box and pressing the Return Key which reveals a pull-down menu from which a final selection may be made.

Useful applications include a card index file, a calculator, a 16 page note pad and clock display.

Many of the other programs on the Welcome disc will be familar to Master owners as these include the Control Panel which allows setting of configuration bytes which define start up options, plus other favourites like the pattern and envelope editor.

Compatibility

Acorn has put a lot of effort in behind the scenes to ensure software compatibilty with over 100 software titles available for the launch of the Master Compact. In general probably the biggest barrier for anybody wishing to port their own software across is the limitation to 3.5 inch discs and the use of ADFS. However any item of software working on the Master 128 that does not take advantage of the peripheral hardware should work first time on the Compact.

The absence of sections of MOS coding should not cause any errors with Osbyte calls returning values to the effect of not being present. The command *TIME and the pseudo variable TIME$ have no real meaning on the Compact because of the absence of the real time clock - however they are both return a dummy value.

ROM firmware again should not create problems, if it works on a Master 128 it should work on a Master Compact.

Hardware Comparison

Feature	Master 128	Master Compact
cpu	65SC12	65SC12
Fitted user RAM	64K	64K
Fitted sideways RAM	4*16K	4*16K
Fitted ROM	128K	64K
ROM sockets	1*16K,2*32K	3*16K, 1*32K
Memory Expansion	2*44way Cartridge sockets	50way edge connector
Non-volatile memory	50bytes CMOS	128bytes EE-ROM
Screen modes	0-7+shadow modes	0-7+shadow
RGB output	Yes	Yes
Composite video	Yes	Yes
TV UHF	Yes	No
Analogue Port	4 Channel A/D	No
Disc Interface	Shugart 34way IDC	Shugart 25way D
Serial port	RS 423	RS 232
Printer port	Centronics 26way IDC	Centronics 24way delta
User port	10 I/O bits	7 I/O bits
Cassette port	CUTS relay	No
Econet Upgrade	Module, ANFS	Module, ANFS
Real Time clock	Time, Calandar and battery	No
1MHz Expansion	Cartidge and 34 way expansion bus	PCB Edge connector (at 2MHz)
Tube expansion	Module/40 way IDC	No

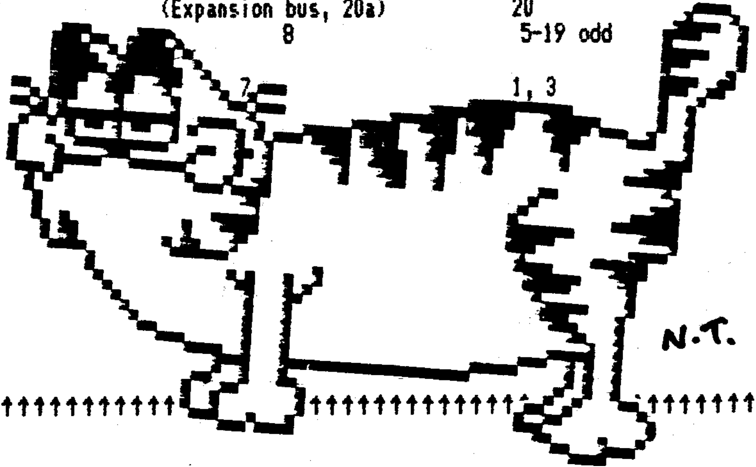
Sound output	4 channel 8R speaker	4 channel 8R speaker
Firmware in ROM	MOS 3.2, Basic 4 ADFS, DFS, View Viewsheet	MOS 5.0, Basic 4 ADFS
Firmware on disc	None	View, Logo
Software	Welcome disc	ABC, Welcome disc Desktop

ROM socket equivalents

Master Compact	Maximum size	Slot number	Master 128
IC38 (sk3)	32K	0,1	Cartridge
IC23 (sk4)	16K	2	Cartridge
IC17 (sk4)	16K	3	Cartridge
IC29	16K	8	IC27

Master Joystick Pinout

6522 User VIA names	Master Compact pin	Master 128 User Port
CB1	5	2
CB2	9 (LPSTB)	4
PB0	6	6
PB1	3	8
PB2	2	10
PB3	1	12
PB4	4	14
PB5	(Expansion bus, 22a)	16
PB6	(Expansion bus, 21a)	18
PB7	(Expansion bus, 20a)	20
0V	8	5-19 odd numbers
5V	7	1, 3



NURSERY RHYMES FOR MICRO BABIES

Tony W. Napier

When reading your off-spring their bedtime nursery rhyme, are you torn between the traditional, and a desire to expose them to the fascinating world of micros that you have discovered? If so, why not try your hand at a mixture of the two, as follows:-

SING A SONG OF PRINTERS

Sing a song of printers, mine is on the
blink.
&18 micro-chips should do a better job I think.
But when the cover's opened, "What is this?" I say,
Out crawls a bug - the creepy kind - and now it prints O.K.

00000001 00000010

00000001 00000010
Try VDU,
00000011 00000100
Try once more.
00000101 00000110
Check your chips,
00000111 00001000
Make sure they're straight.
00001001 00001010
Once more, and then,
00001011 00001100
It works! well, well!!

A TONGUE TWISTER

Concatenation, variable and string,
Apostrophe, asterisk, quotation and pling.
Integer, interrupt, IRQ handling,
Does this little rhyme mean anything?

No it dosn't, but if you can say it quickly, and correctly, three times after your User Group Mid-winter social, you can drive yourself home!

BUILD YOUR OWN DATABASE MANAGER.

Beebug Filer - a database for all.

Neville Hudson reproduces this exciting new software project for all Beeblet readers in which is described how to build your own flexible database program.

Beebugsoft have kindly agreed to allow us to publish their very successful series on the Beebug Filer. Copyright remains with Beebugsoft.

The series will be brought to you in five monthly parts in exactly the same manner as it was produced in Beebug.

One of the major uses of computers today is the storing of large quantities of information, and many home micro users find this an attractive and worthwhile use for their micro. To match this interest we present the Beebug database.

Beginning this month, we present a disc based database system that will meet many practical needs. We start with the basic program, showing how to create a simple database file. Further articles will add to the basic program to provide selective retrieval of records, formatted output, sorting and other facilities. The program will be entirely in Basic, and we will show you how to modify and extend the program to cater better for your own requirements if you wish.

Of course, a program published in a magazine cannot hope to provide all the features and power of commercial packages, like the Beebugsoft Masterfile or Acornsoft's Viewstore, but for those considering purchase, our own program will provide a useful testbed for your ideas, before parting with your cash.

THE SOFTWARE PROJECT

The program listed this month is complete and fully working as far as it goes. It provides the basic facilities for creating a database file of your choice, entering, displaying and deleting records. The program is written so that further functions can be readily added and existing functions improved as may seem desirable for this project. Although we have planned the additional features to be added to the program, we would welcome any feedback or ideas, and the best of these may be incorporated in a further article.

The database has been designed specifically for disc systems allowing direct, rather than just sequential, access to records. The program is command-driven, rather than menu-driven. Although menu-driven programs are very popular, commands provide much more direct and efficient ways of controlling an application, once you have learnt their meanings.

The program is designed for mode 3 to allow the maximum screen space for displaying records and other information. The screen is divided up into two main areas, the principal section for presenting records and other information, with four lines reserved at the bottom of the screen for commands and other user responses. The initial set of commands and their functions are as follows:

CREATE	Create a new file on disc
OPEN	Open an existing file for use
CLOSE	Close a file in use
ADD	Add a new record to the file
DISPLAY	Display records from the file
DELETE	Delete a record from the file
END	Close any file in use and exit

All commands can be abbreviated to a minimum of two letters, and may be entered in upper or lower case. Some commands can use parameters as described below. Parameters must always be separated from the command (or its abbreviation) by a single space. All the usual *commands may be used as well.

FILE MANAGEMENT

The first three commands listed above are concerned with file management. Both CREATE and OPEN require a filename to be specified. When you use CREATE to set up a new file you will need to specify a file description as follows:

Number of records
Number of fields per record
Fieldname for each field
Fieldwidth for each field

You will have a chance to either confirm or reject your file description.

RECORD MANAGEMENT

Records are entered using the ADD command. An empty record is displayed on the screen and is filled in field by field before you confirm whether it is to be written to disc. All records may be displayed using the DISPLAY command, or any individual record displayed by specifying its record number. Similarly a record to be deleted is displayed on the screen so that you can confirm your action. Deleted records initially remain in the file and appear as blank records on the screen. However, when you close the file or exit from the program, the file is compacted to lose the deleted records.

Next month we will give a more detailed description of the file structure and the program as well as adding further to the existing program. When you enter the program please keep to the line numbering given so that later additions will fit with no problems.

BASIC I

Basic I users should replace OPENUP by OPENIN at lines 2860 and 3260.

Video Digitising CARSOFT Hawkes Bay New Zealand
24 Margaret Ave, Havelock North, Hawkes Bay.
Digitising Service

From TELEVISION: (Priced between 50c - $1.00)
Send 50c for out Catalogue of Digital Pictures Available. (If your favorite is not listed in our Catalogue and is now showing on T.V. it can be arranged, But Video Tape Picture price applies.)
Postage & Packing: $1.00 per Order.

From YOUR TAPES: (VHS ONLY)
Send us your tapes with a description of Person(s)/Object(s) and approx Location on tape(s). Please state MODE (0,1 or 2)

Prices: Up to 9 Pictures $1.60 per picture
10 or More Pictures $1.30 per picture

Postage & Packing: $1.35 per Tape: First Class Surface Mail.
$2.10 per Tape: Air Mail.
$1.00 per Tape: Second Class Surface Mail.

You MUST send 1 80T disk per every 8 pictures or add $12 per 8 pictures. (Bonus pictures may be included if enough space.)

SCHOOLS APPLY FOR OUR SPECIAL CHEAP RATES!
PAYMENT: CHEQUE or POSTAL ORDER to be made payable to M.D.MILLER

```
  10 REM BEEBUG FILER version B1.9
  20 REM Author Mike Williams
  30 REM BEEBUG November 1985
 100 MODE3:ON ERROR PROCerror:END
 120 PROCsetup:PROCtitle:PROCwindow2
 140 REPEAT:PROCcommand:UNTIL exit%
 165 PROCclose:VDU26,12:*FX4,0
 170 END
 180 :
1000 DEF PROCsetup
1020 LOCAL I:exit%=FALSE:open%=FALSE
1040 maxf=12:X=0:Y=0:*FX4,2
1060 DIM com$(20),record$(maxf),field$(
     maxf),width%(maxf),os 40
1080 READ N
1100 DATA 7
1120 FOR I=1 TO N:READ com$(I):NEXT I
1140 DATA CREATE,OPEN,CLOSE,ADD,DISPLAY
1160 DATA DELETE,END
1180 ENDPROC
1200 :
1300 DEF PROCtitle
1320 PRINTTAB(28,1)"B E E B U G  F I L
     E R"
1340 PRINT STRING$(80,"_")
1360 PRINTTAB(0,20)STRING$(80,"_")
1380 ENDPROC
1400 :
1500 DEF PROCcommand
1520 LOCAL command$,pm$
1540 REPEAT
1560   INPUT"-> " command$
1580   C=FNvalidate(command$)
1600   IF C=0 THEN PRINT"Unrecognised c
       ommand"
1620   UNTIL C
1630 IF C=1 THEN PROCcreate(pm$)
1640 IF C=2 THEN PROCopen(pm$)
1650 IF C=3 THEN PROCclose
1660 IF C=4 THEN PROCadd(pm$)
1670 IF C=5 THEN PROCdisplay(pm$)
1680 IF C=6 THEN PROCdelete(pm$)
1690 IF C=7 THEN exit%=TRUE
1870 IF C=99 THEN PROCstar(pm$)
1880 ENDPROC
1890 :
2200 DEF FNvalidate(C$)
2220 LOCAL found%,I,P:found%=0
2240 FORI=1 TO N
2260   IF (ASC(MID$(C$,1))AND223)=ASC(M
       ID$(com$(I),1)) AND (ASC(MID$(C$
       ,2))AND223)=ASC(MID$(com$(I),2))
        THEN found%=1
2280   NEXT I
2300 P=0:IF C$>"" THEN P=INSTR(C$," ")
2320 IF P=0 THEN pm$="" ELSE pm$=MID$(C
     $,P+1)
2340 IF ASC(C$)=42 THEN pm$=MID$(C$,2):
     found%=99
2360 =found%
2380 :
2500 DEF PROCcreate(p$):LOCAL I
2520 IF p$="" THEN PRINT"No file given"
     :ENDPROC
2540 IF open% THEN PRINT"File already o
     pen":ENDPROC
2560 PROCwindow1:CLS
2580 PRINTTAB(5,0)"Creating file ";p$
2600 PRINTTAB(5,2)"Number of records:":
     recn=VAL(FNinput(24,2,4,"."))
2620 PRINTTAB(45,2)"Number of fields:"
2640 REPEAT:f=VAL(FNinput(63,2,2,".")):
     UNTIL f<=maxf
2660 FOR I=1 TO f
2680   PRINTTAB(5,3+I)"Field";STR$(I)
2700   PRINTTAB(16,3+I)"Name";
2720   field$(I)=FNinput(21,3+I,12,".")
2740   PRINTTAB(45,3+I)"Fieldwidth"
2760   REPEAT:width%(I)=VAL(FNinput(56,
         3+I,2,".")):UNTIL width%(I)<=6
       4
2780   NEXT I:PROCwindow2
2800 IF FNask("Confirm (Y/N): ")>2 THEN
      ENDPROC
2820 recs=2*f:FOR I=1 TO f:recs+width%(
       I):NEXT I
2840 PROCoscli("SAVE "+p$+" 0+"+STR$~(2
     56+recn*recs))
2860 rec=1:F=OPENUP(p$):PTR#F=0:PRINT#F
     ,rec,recn,recs,f
2880 FOR I=1 TO f:PRINT#F,field$(I),wid
       th%(I):NEXT I:CLOSE#F
2900 PROCwindow1:CLS:PROCwindow2
2920 PRINT"File ";p$;" created"
2940 ENDPROC
2960 :
3200 DEF PROCopen(p$):LOCAL I
```

```
3220 IF p$="" THEN PRINT"No file given"
     :ENDPROC
3240 IF open% THEN PROCclose
3260 F$=p$:F=OPENUP(F$)
3280 IF F=0 THEN PRINT"No such file":EN
     DPROC ELSE open%=TRUE
3300 PTR#F=0:INPUT#F,rec,recn,recs,f
3320 FOR I=1 TO f:INPUT#F,field$(I),wid
       th%(I):NEXT I
3330 IF f>8 THEN L=1 ELSE L=2
3340 PROCheader:ENDPROC
3360 :
3600 DEF PROCadd(p$):LOCAL I
3620 IF NOT open% THEN PRINT"No file op
     en":ENDPROC
3640 PROCwindow1:PROCrecord
3660 PROCinv(1):PRINTTAB(64,0)"Record:"
     ;SPC(4-LEN(STR$(rec)));rec:PROCinv
     (0)
3680 FOR I=1 TO f:record$(I)=FNinput(13
       ,L*(I-1)+1,width%(I),"."):NEXT I
3700 PROCwindow2:IF FNask("Confirm (Y/N
     ): ")<3 THEN PTR#F=256+recs*(rec-1
     ):FOR I=1 TO f:PRINT#F,record$(I):
     NEXT I:rec=rec+1:PTR#F=0:PRINT#F,r
     ec
3720 PROCwindow1:PROCinv(1):PRINTTAB(47
     ,0)SPC(4-LEN(STR$(rec-1)));rec-1:P
     ROCinv(0):PROCwindow2
3740 ENDPROC
3760 :
4000 DEF FNinput(x,y,w,p$)
4020 LOCAL ch$,c,p:ch$="":p=1
4040 PRINTTAB(x,y)STRING$(w,p$):VDU31,x
     ,y
4060 REPEAT:c=GET
4080   IF c=127 THEN PROCd ELSE PROCa
4100   UNTIL c=13
4120 ch$=ch$+STRING$(w-LEN(ch$),p$)
4140 =ch$
4160 :
4180 DEF PROCd
4200 IF p>1 THEN VDU8,ASCp$,8:ch$=LEFT$
     (ch$,LEN(ch$)-1):p=p-1
4220 ENDPROC
4240 :
4260 DEF PROCa
4280 IF p<=w AND c<>13 THEN ch$=ch$+CHR
     $(c):VDU c:p=p+1
4300 ENDPROC
4320 :
4500 DEF PROCrecord:LOCAL I
4520 FOR I=1 TO f
4540   PRINTTAB(0,L*(I-1)+1)field$(I)TA
       B(13)STRING$(width%(I),".")
4560   NEXT I:ENDPROC
4580 :
4800 DEF PROCdisplay(p$)
4820 LOCAL G,I,start,end,n:n=VAL(p$)
4840 IF NOT open% THEN PRINT"No file op
     en":ENDPROC
4860 IF rec<2 THEN PRINT"No records in
     file":ENDPROC
4880 IF n<0 OR n>rec-1 THEN PRINT"No su
     ch record":ENDPROC
4900 PROCwindow1:PROCrecord
4920 IF n THEN start=n:end=n ELSE start
     =1:end=rec-1
4940 FOR I=start TO end
4960   PROCdisplay1(I)
4980   IF I<end THEN G=GET
5000   NEXT I:PROCwindow2
5020 ENDPROC
5040 :
5200 DEF PROCdisplay1(n)
5220 LOCAL I
5240 PROCinv(1):PRINTTAB(64,0)"Record:"
     ;SPC(4-LEN(STR$(n)));n:PROCinv(0)
5260 PTR#F=256+recs*(n-1)
5280 FOR I=1 TO f:INPUT#F,record$(I):PR
       INTTAB(13,L*(I-1)+1)record$(I):N
     EXT I
5300 ENDPROC
5320 :
5500 DEF PROCdelete(p$)
5520 LOCAL A,I,n:n=VAL(p$)
5540 IF NOT open% THEN PRINT"No file op
     en":ENDPROC
5560 IF rec<2 THEN PRINT"No records in
     file":ENDPROC
5580 IF n<1 OR n>rec-1 THEN PRINT"No su
     ch record":ENDPROC
5600 PROCwindow1:PROCrecord
5620 PROCdisplay1(n):PROCwindow2
5640 A=FNask("Delete (Y/N): ")
5660 IF A<3 THEN PTR#F=256+recs*(n-1):F
       OR I=1 TO f:PRINT#F,STRING$(widt
       h%(I),".")":NEXT I
 5680 ENDPROC
 5700 :
 6000 DEF PROCclose:LOCAL I,J,K
 6020 IF NOT open% THEN PRINT"No file op
      en":ENDPROC
 6030 IF rec=1 THEN 6160
 6040 PRINT"Please wait - closing file "
      ;F$
 6060 J=1:FOR I=1 TO rec-1
 6080   PTR#F=256+recs*(I-1)
 6100   FOR K=1 TO f:INPUT#F,record$(K):
        NEXT K
 6120   IF ASC(record$(1))<>46 THEN J=J+
        1:PTR#F=256+recs*(J-2):FOR K=1 T
          O f:PRINT#F,record$(K):NEXT K
 6140   NEXT I:rec=J:PTR#F=0:PRINT#F,rec
 6160 PRINT"File closed - ";rec-1;" reco
      rds in use"
 6180 CLOSE#F:open%=FALSE
 6200 ENDPROC
 6220 :
20000 DEF FNask(msg$)
20020 LOCAL A:PRINT msg$;
20040 REPEAT:A=INSTR("YyNn",GET$):UNTIL
      A:IF A>2 THEN PRINT"N" ELSE PRINT"
      Y"
20060 =A
20080 :
20200 DEF PROCheader
20220 PROCwindow1:CLS
20240 IF open% THEN PROCinv(1):PRINT STR
      ING$(80," "):PRINTTAB(5,0)"File: "
      F$;TAB(28,0)"Number of records: "S
      PC(4-LEN(STR$(rec-1)));rec-1:PROCi
      nv(0)
20260 PROCwindow2:ENDPROC
20280 :
20400 DEF PROCwindow1:IFw=2 X=POS:Y=VPOS
20420 VDU28,0,19,79,3:w=1:ENDPROC
20440 DEF PROCwindow2:VDU28,0,24,79,21
20460 VDU31,X,Y:w=2:ENDPROC
20480 :
20600 DEF PROCinv(on)
20620 IF on THEN COLOUR0:COLOUR129 ELSE
      COLOUR1:COLOUR128
20640 ENDPROC
20660 :
30000 DEF PROCstar(p$)
30010 PROCwindow1:CLS:PROCoscli(p$):PROC
      window2
30020 PRINT"Press any key to continue";
30030 G=GET:PROCheader:PRINT
30040 ENDPROC
30050 :
30060 DEF PROCoscli($os)
30070 LOCAL X%,Y%
30080 X%=os:Y%=os DIV 256:CALL &FFF7
30090 ENDPROC
30100 :
31000 DEF PROCerror
31010 IF ERR=17 THEN PROCwindow2:PRINT"C
      ommand aborted":GOTO 140
31020 ON ERROR OFF
31030 PROCwindow2
31040 REPORT:PRINT" at ";ERL
31050 PROCclose:VDU26:*FX4,0
31060 ENDPROC
```

HELP

A Forum Conducted by Steven Rose

There haven't been any problems received this month, so I'll supply you with a few hints instead.

Hints

BBC Masters

1. BBC Masters can be obtained in Wellington through Neville Hudson, at 249 Darlington Road, Miramar. He tells me the price is $1545*, currently plus freight ($6-$10). Delivery takes around two days when Barsons have them in stock, which seems to be most of the time.

   *Special UG price until September 20 - Ed.

REVS and WW+

2. When you have been playng REVS on a BBC B, and want to use Wordwise Plus, you won't get much joy unless you switch off the machine first (unless it's just my machine - anybody else get this problem?).

Ed.: Wordwise Plus is rather more powerful than Wordwise, but often seems to hangup if you try to fire it up after quite a few games programs. This has probably got something to do with the fact that it is using slightly different blocks of memory. It also gets rather more upset about erroneous imbedded codes.

!BOOT file comments

3. If a !BOOT file line has an asterisk immediately followed by a vertical broken line (above \) the rest of the line is passed to the O.S. which ignores it.

BREAK in a !BOOT file

4. The rough equivilent to the BREAK key is CALL !-4 (or CALL &FFFC), which can be used in exec files or in programs.

Downloading programs

5. Frequently, when moving a program from tape to disc, a problem arises, usually "Bad mode at ...". This is caused by the program being loaded into memory at a higher address than the programmer expected, due to PAGE being at &1900 rather than at &E00, and consequently not having enough memory left for the screen mode used. There are four possible solutions, three resulting in PAGE being set to a lower address:

    1. Use a short loader program, which sets PAGE to, say, &1200, and then CHAINs the main program.

    2. As the first thing you do, test PAGE to see if it's at the correct address, and if not, set PAGE to the correct address and CHAIN the program again. This works because once the program starts, it only looks at PAGE when it does a GOTO or GOSUB, or calls a PROC or FN.

    3. Use a downloader routine along the lines of

        ```
        "FOR A% = 0 TO TOP - PAGE STEP 4 :
            A% ! &1200 = A% ! PAGE :
            NEXT"
        ```

        Don't forget to reset PAGE, do an OLD to reset TOP and LOMEM, and only use resident variables in the downloading routine. If you use non-resident variables, they are stored at LOMEM, which then can't be moved without corrupting them. The easiest ways to do an OLD are: to program a function key with the OLD and RUN, and use *FX 138 to insert a function key "press" into the keyboard buffer; or to use several *FX 138 calls to insert the characters O, L, D, <cr>, R, U, N, <cr>.

    4. Break up the program into two or more smaller pieces and CHAIN them one after the other.

The lowest safe value for PAGE with the DFS is &1100. If you have the ADFS too, use &1200. Having run your program, either set PAGE back to it's original value and type *DISK or *ADFS to initialise the filing system workspace, or press BREAK, which does the same thing.

Programming Laws (from "The Oficial Rules" by Paul Dickson)

6. When working towards the solution of a problem, it helps if you know the answer (Provided you know there is a problem).

Adding manpower to a late software project makes it later.

Computing power increases as the square of the cost. If you want to do it twice as cheaply, you have to do it four times as fast.

If at first you don't succeed, transform your data set.

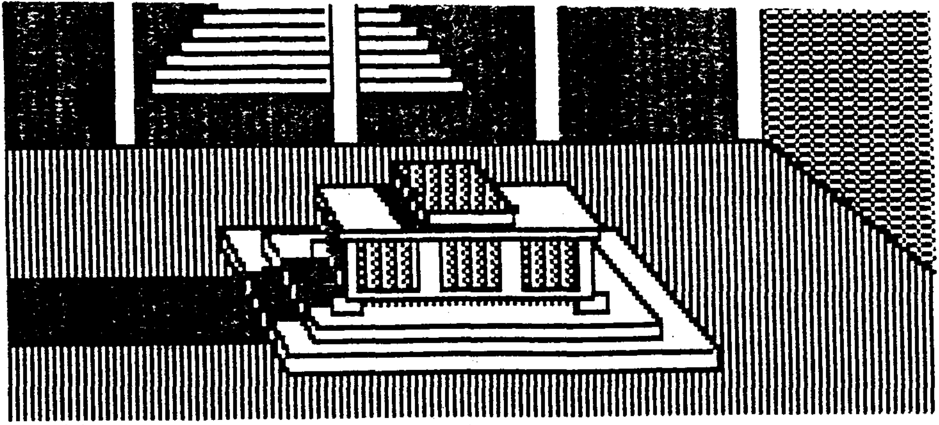
If you don't know what your program is supposed to do, don't start writing it.

All real programs contain errors unless proved otherwise - which is impossible.

My law (Rose's Law)

(General) The time required to solve a problem is directly proportional to it's urgency.

(Computing) The time required to fix a bug (/ amend a program) is directly proportional to it's urgency.



EXCUSES AND APOLOGIES

Anne F

Do you ever look beyond the computer section of the magazine racks in bookshops? If so, did you notice a recent MAD magazine issue featuring computers? One "article" started like this:

> There are thousands of programs in the market that are supposed to be a boon to the home computer user. But come on! How many times do you need a mail merge program? Or a 48-column worksheet? If companies really want everyone to buy a home computer, then how about some...

PRACTICAL COMPUTER PROGRAMS FOR EVERYDAY USE

Unfortunately, whilst it offers 6 possible program ideas, the only listing in the mag is one to create your own MAD logo and Alfred E Neuman face: versions are given for Apple, Atari, Commodore, and IBM with colour card. So here is the "Excuse" program listing, for computers using BBC Basic (ie Atari, BBC, Commodore...). The idea offered was that each morning you were running late (eg slept in), you could use the computer to 'suggest' some excuses to try on the boss.

I've extended the idea a little, by displaying the date used. This has the advantage of showing you have used 'flat car battery' 3 days in a row, so perhaps you should, for the 4th day, use 'had to wait for garage to instal new battery'. You would be well advised to not use 'flat battery' for some time (you can check the date) - try a variation such as 'new battery faulty'...

The main listing:
Reads the list of excuses in from a data file, along with the dates each was used (if at all). It displays all the excuses, then asks you to choose an excuse, or enter a new one. When you are satisfied with the excuse, it then asks you for the date and updates the excuse file for you.

The shorter listing is a simple way for you to set up the initial excuse data file in the first place. Instead of trying to edit INPUT excuses, I've cheated, and put them in DATA statements - supply your own as you type in this listing. The *SAVE at line 90 is to avoid the 'Can't extend' problem that can occur when you try to save a file that's longer than an existing one with the same name.

If you have Basic I, then replace all occurrences of OPENUP with OPENOUT.

FUTURE ENHANCEMENTS:

At the moment, the program only checks that there are enough characters in the date, not that it is a plausible date.
There is no facility to edit an existing excuse or delete it.
An alternative way of viewing the excuses would be to scroll through them with the arrow keys, able to go up and down the list. The excuse currently being looked at could appear in a different colour, or in reverse video, and the Return key could be used to 'accept' an excuse.
I'll start work on these during the coming month.

```
 10 REM set up data file for Apologia
 20 MODE 7
 30 I%=0
 40 REPEAT
 50   READ A$
 60   IF A$<> "END" THEN I%=I%+1
 70   UNTIL A$="END"
 80 RESTORE
 90 *SAVE D.EXCUSE 0000 0400
100 D%=OPENUP "D.EXCUSE"
110 PRINT#D%,I%
120 FOR J% = 1 TO I%
130   READ A$
140   PRINT#D%,A$,"?"
150   NEXT J%
160 CLOSE#D%
170 PRINT"FINISHED"
180 END
190
200 DATA car battery flat
210 DATA traffic jam
220 DATA grandmother died
230 DATA child sick
240 DATA bus timetable changed
250 DATA took potential client to breakfast
260 DATA cows got bloat and had to wait for vet
270 DATA END
```

```
   10 REM APOLOGIA
   20 REM Thanks MAD
   30 MODE7
   40 PRINT''"Running late for work?"''"Use the SH
IFT key to scroll through some"
   50 PRINT'"Excuses for the Boss"'"Getting them f
or you now."''
   60 D%=OPENIN "D.EXCUSE"
   70 INPUT#D%,qty%
   80 temp%=qty%+1
   90 DIM excuse£(temp%), date£(temp%)
  100 PROCread_excuses
  110 CLOSE#D%
  120 wait=INKEY(300)
  130 PRINTTAB(0,7)STRING£(40,".")
  140 VDU28,0,24,39,8
  150 REPEAT
  160   VDU14
  170   FOR I%=1TO qty%
  180     PRINT';I%;" ";excuse£(I%)
  190     PRINTTAB(5);date£(I%)
  200     NEXT I%
  210   PRINT';qty%+1;" Got a new one?"
  220   PRINTSTRING£(40,".")
  230   VDU15
  240   REPEAT
  250     INPUT'"Which excuse number today",ex%
  260     IF ex%<1 OR ex%>qty%+1 THEN PRINT"There'
s no excuse for that!"
  270     IF ex%=qty%+1 THEN PROCnew_excuse
  280     UNTIL ex%>0 AND ex%<qty%+2
  290   PRINT';ex%;" ";excuse£(ex%)'TAB(15);date£(
ex%)
  300   REPEAT
  310     *FX202,162
  320     INPUT'"Is this the excuse you want  Y/N"
,ans£
  330     PRINTans£
  340     UNTIL INSTR("YN",ans£)
  350   IF ans£="N" THEN PRINT"Let's start again t
hen.":wait=INKEY(200)
  360   UNTIL ans£="Y"
  370 IF ex%=qty%+1 THEN max%=ex% ELSE max%=qty%
  380 REPEAT
  390    PRINT''"Please enter today's date"'"in the
format dd.mm.yy"
  400   PRINT"- ie 19 Sept 1984 appears as 19.09.8
4"
```

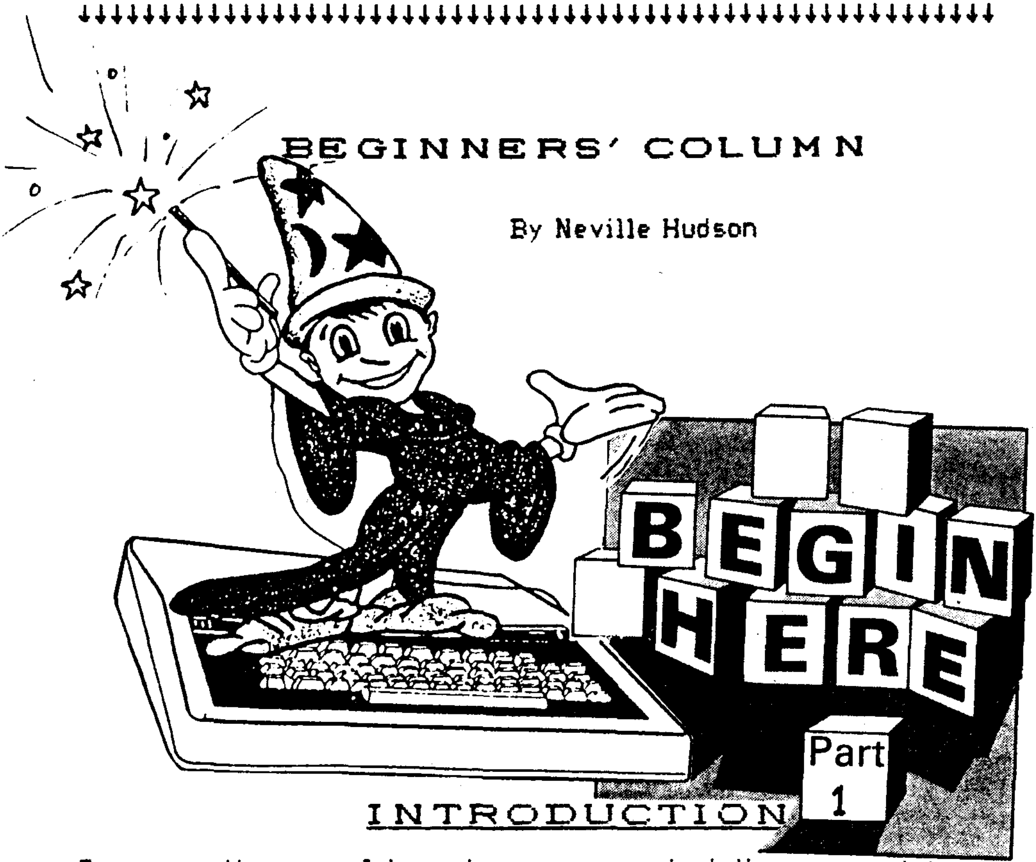
```
  410    INPUT'day$
  420    UNTIL LEN(day$)=8
  430 date$(ex%) = date$(ex%)+" "+day$
  440 PRINT'"Updating the excuse file now."
  450 PROCsave
  460 PRINT"All finished now."
  470 END
  480
  490 DEF PROCread_excuses
  500 FOR I%=1TO qty%
  510    INPUT#D%,excuse$(I%),time$
  520    IF time$<>"@" THEN date$(I%)=MID$(time$,2,
100) ELSE date$(I%)=""
  530    NEXT I%
  540 ENDPROC
  550
  560 DEF PROCnew_excuse
  570 REPEAT
  580    PRINT''"What's the new excuse?"
  590    INPUTLINE new$
  600    REPEAT
  610      *FX202,162
  620      INPUT''"Is that correct  Y/N",ans$
  630      UNTIL INSTR("YN",ans$)
  640    UNTIL ans$="Y"
  650 excuse$(qty%+1) = new$
  660 ENDPROC
  670
  680 DEF PROCsave
  690 D% = OPENUP "D.EXCUSE"
  700 PRINT#D%,max%
  710 FOR I%=1 TO max%
  720    PRINT#D%,excuse$(I%),"@"+date$(I%)
  730    NEXT I%
  740 CLOSE#D%
  750 ENDPROC
```

Dear Editor,
Nappies have no place in a computer magazine - not even in the Electron column, despite its being the 'baby' of the Acorn machines.
signed

Mother of 4 Kids & 4 computers (Beeb, Master, Sharp 9560, Singer 560)

BEGINNERS' COLUMN

By Neville Hudson



INTRODUCTION

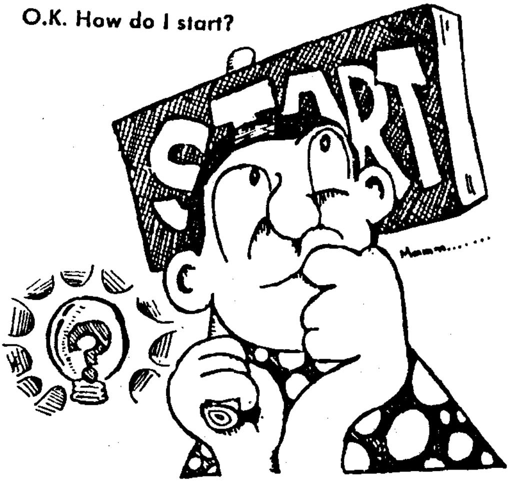
For some time now I have been concerned at the apparent large number of people buying the BBC computer and not getting the best use from the machine. My intention in this series is to show learners some tips and pass on information which I have learned, often the hard way. I must add that I am not an expert but an enthusiastic user of a BBC B. Most of what I will be passing on can be found in the User Guide or other publications available through local book stores. Everything found in this column has been tried and found to work on the BBC B but may or may not work on other models.

My computer is an issue 7 with an ATPL board installed. On the ATPL board I have an Acorn DFS, AMX mouse, Help ROM, Commstar, Wordwise Plus, Intersheet, Interchart, Spell III, Basic 2 and 16K of sideways RAM. On the main board I have Enigma, View 2 and Viewsheet. On the other side I have the Acorn speech kit. I have found that this combination of ROMs works well without corrupting one another. I have several other ROMs which do not work well with this combination. For example, one of my other ROMs has a strange effect on the TAB key. As you have probably noticed I have 2 word processors which is an over kill. To stick my neck out, here is my opinion on the best one. View is a very good word processor similar to commercial word processors. It is however, considerably more difficult for dummys like me to use. I would therefore recommend Wordwise or Wordwise plus unless you are writing a book. If you intend that your children use the computer wordprocessor then I suggest Wordwise, Wordwise plus or one of the word processors written for children. This column is written using Wordwise plus and then checked using Spell III.

It is not necessary to have all these extra bits inside the computer. The reason you bought the computer in the first place will determine the selection that best suit your needs. I certainly would not like to be responsible for people rushing out to buy ROMs etc which they have no use for. One of the best features of the BBC computer is the fact that you can start with a basic machine and add to it as your ability and needs change.

Of far more urgency is the need to get a disc drive or drives if you are one of those poor unfortunates who still spend several minutes loading and saving programs on tape. Unless of course you enjoy this part of the operation.

The Beginners Column will be written to accommodate users of the BBC B computer with at least one disc drive but I will be happy to refer requests for assistance on matters raised by this column to the National User Group "Expert" for those of you with other models or tape based machines. Any correspondence relating to this column should be addressed to Beginners' Column. P.O. Box 9592, Wellington.


O.K. How do I start?
START
Mmm......

GETTING STARTED

If you are anything like me, you have probably only read the User Guide on the odd occasion when all else has failed. The first thing most of us want to do when we get our new computer is to turn it on and get started. When I bought my first computer it came complete with a utilities disc on which was a menu with a program called Form 40/80. I knew enough about computers to get the computer turned on with the disc drive working but that was all. This program when selected asked if I wanted to format the disc. This seemed like a good idea so I said yes. Unfortunately the disc was not protected and it wiped the utilities disc. Imagine the embarrassment when I went back to the shop and told them the disc wasn't working anymore and when they checked it found that it had been reformatted. I had several other experiences like this one but in the end I sorted myself out and made a lot of progress by reading the user guide. I can assure you that if there was a wrong way to do something then in my early computer days I found it. By the time you decided to join the User Group and therefore have this magazine you have probably already been down this path yourself. If you have a funny or tragic story to tell about your early computer experiences then write and share it with us.

I will assume that you have discovered how to turn the computer on and that it is correctly set up with a monitor and a disc drive. It is a good idea to get someone to help you for the first few times when using the computer. The User Group will be able to put you in contact with someone in your area who you can go to for help. Remember after each command or to enter a statement PRESS THE RETURN KEY.

DISCS

When a disc is blank - brand new, it is just an array of jumbled magnetic information. The disc must be formatted before it can be used by the computer. Formatting is rather like magnetizing a steel bar. Just as in a steel bar, the molecules go in rows and lines, so it is similar in a disc. Formatting a disc puts recognisable sections onto it where the data is to be put.

Disc drives are constantly being improved and their capacity being extended. Because of this it is very important that you find out what type of formatting and how many tracks your disc drive works on before you attempt to format any discs yourself.

For ease of explanation I will cover formatting from the point of view of a 40 track disc drive. The formatting program divides the disc up into tracks. These are rather like grooves on a record. They start at track 0, the outermost groove and go towards the centre to track 39 on the inner most groove for a 40 track disc. 80 track formatting is slightly different. Each track is further divided into 10 sectors in the same way as a round pie would be cut into 10 equal pieces, and then, as well as the sector divisions (pie pieces), there is 40 grooves like a record. Each sector is further divided into 256 bytes. Space on the disc and in the computers memory is measured in bytes. One byte corresponds to one character.

256 bytes in each sector are available for storing your programs or data. From this it follows that a 40 track disc will hold:

40 tracks x 10 sectors x 256 bytes = 102400 bytes per disc side

and a 80 track disc will hold:

80 tracks x 10 sectors x 256 bytes = 204800 bytes per disc side.

The disc filing system automatically records the location of your programs or data on the disc. The first two sectors on track zero of the disc are reserved for this purpose. The catalogue of the disc is recorded in these sectors. Whenever you wish to access a piece of information on the disc, the disc filing system reads the catalogue first to find out where on the disc it can be found. The tracks and sectors are each given a number and this makes it very easy for the computer to find information quickly.

As already stated, discs cannot be used until they have been formatted. The Welcome disc should have a utilities program on it to allow you to format your discs. Follow the instructions carefully when formatting. In particular, take out the source disc when prompted to do so by the computer. It is advisable to format all your new discs at once so as not to get confused as to which discs are formatted.

CARE OF DISCS

Take care of your discs. Always adhere to the warning on the back of disc envelope and the following:

1. Always replace discs not in use into their protective wallets.

2. Magnetic fields can damage your disc, so don't place them on top of equipment or near magnets.

3. Never touch the disc surfaces where they are exposed through the black case or attempt to remove the disc from its case.

4. Never write on the case or onto the envelope whilst it contains the disc with a ball-point pen or other sharp object. Use only a felt-tip pen and use only very light pressure.

5. Keep the discs away from moisture and from sources of heat such as radiators or the sunlight through windows.

6. Never fold or roll up the disc.

7. Try wherever possible to keep the disc free from dust and other contaminants.

8. Don't try to keep more than 10 discs in a box. The bending action of you trying to find the disc you want will eventually damage the disc. If you want to keep more than 10 discs together then purchase a special container for this purpose.

9. Insert discs into the drive carefully. If the drive rotates noisily, open the drive door or catch and adjust the disc.

10. To protect your programs or data always place a TAB (sticker) over the square slot in the side. This prevents material being added to the disc and destroying programs or data already stored on it. The TAB (sticker) must be removed to format the disc or to add data to the disc.

11. Trying to save data onto a protected disc with a TAB (sticker) on, will result in a "disc read only" message.

USING A DISC

How a disc is used depends on the type of disc filing system (DFS) in the computer. I have an Acorn DFS and so the following information is correct only for that DFS. People with a Solidisk DFS will get the same information but laid out in a slightly different format.

Place a disc into the disc drive and follow me through the next few steps. After each command remember to press the RETURN key.

1. To see all the files in the catalogue on drive 0, use the command *CAT and press the RETURN key. (This may be abbreviated to *.)

A list of all the files in directory order will be produced.

2. At the top on the left will be a number inside brackets. This number is used for security purposes. Each time

the disc is altered in some way this number increases. Take a note of this number and you will see how it changes as we proceed.

3. Below this figure is the drive number currently being used. The BBC computer can use up to four drive surfaces. Use the command *.2 and see the result. Using the command *. will revert back to drive 0.

4. Below the drive number is the directory. This will usually be 0.£. More on this in latter articles.

5. On the top right will be the disc option. A new disc will have Option 0 (off) although used discs could have Option 2 (RUN) or Option 3 (EXEC). Use the command *OPT4,3 and then *. and see the change. More on this in latter articles as well.

6. Below the option will be the library. More on this in latter articles as well.

7. In front of the number in brackets there may be a title for the disc. If not type *TITLE TEST and press return. Now *. and see the difference. More on this feature in a latter article.

8. Below this disc heading is the list of all the files on the disc. More on how to read these in a latter article.

This completes this months article. However, to get the maximum benefit next month you will need to have completed the homework below.

HOMEWORK

The following program is to be typed in and saved as !MENU before the next magazine comes out. Next month I will be covering producing back-up copies and building a personalised disc and you will need the !MENU program. GOOD COMPUTING.

Listing on page 34 ->

SAVING YOUR HOMEWORK

To save your homework after typing in the program, type the command SAVE "!MENU" and then press the RETURN key. Once you have done this it will be quite safe to RUN the program but it might not mean too much to you at this stage.

A Letter.

Following a call out of Wellington requesting contributions for Beeblet, from the Deep South, I submit the following.

We have noticed from issue to issue the requests for contributions and a number of this areas members and users have put time and effort into articles or replies to "Help needed" with not so much as a "received with thanks" let alone a bit of space in Beeblet pages. Another point in this hew as a comment heard from outside our area is that some of the contributions that are sent in appear in an altered, shortened, or rearranged manner, often changing the authors original to a point of misinterpretation.

Based on this sort of feed-back, there is a shortage of enthusiastic contributors in this area, and will probably continue to be, unless some assurance of change is motted ; And we ARE aware of the very good voluntary work of a few!! Of the three or four from here that have had tracable misplaced mail, we still "hope for the best" in regards the future of the National Group and the Beeblet.

With Thanks,
Martin Mc D   Dn. 23/8/86.

DUNEDIN REPORT

(incorporating unpublished sections of a report submitted in 1985)

Martin Mc D Dn Sept.'86.

Firstly, I don't have a list of the local (Otago) members of the National Group, so any of you out there that are not on my 'phoning list - ring me. The list is compiled of visitors that have been along to one or more of our monthly meetings this year, and has grown to where we now have contact with around 30 BBC users and 10 ELECTRON users with a growing number of Master owners or users in the Dunedin area as well as a number of "out of towners". These numbers do not include the school based networks from which we wil hopefully draw a growing user interest.

Our monthly meetings have been mainly along the "meet and chat" format with very little formality (or organization some would add) but have been fairly well attended and enjoyed, with some leaving better informed than when they arrived. A few members were brave enough, during last year, to help fill in a meeting night - one was on tape recorder settings with a scope-check and advise night ; Thanks to Electron Bill. The second was Rodney Wordwise with a very informative night of demonstration and explanation using Wordwise and a new printer to show off the powers of both, but the HELP was aimed at "printer code breaking for the confused" and with Anne F// Beeblet handouts, worked very well. Thanks Rodney for this and to all the others for pointers shared during the year. I would also like to thank the local Whitcoulls people for their continued efforts and support under the "Auckland influence".

The Group has established a disc and tape library of software, along with a donated magazine supply and library list of members magazines for reference, all of which will hopefully be kept up to date and updated with new contributions from members. Next to be added is a swop-spot type notice board, flushed monthly. This is (hopefully) using the "Neil Gordon / UG Modem" from early this year and a BB service made available through the effort of the Otago Branch NZ Computer Society, The Otago University, and the Central City Computer Users Group. The service is using space on the University VAX Computer and has Bulletin provision for some six or seven machines at this stage; included are BBC, Z80, Apple, Atari, Commodore, CPM, Spectrum, Spectravidio, and System 80, along with other services, added or deleted as demand or interest dictate. Access application forms are now available from Mr Terry Stevens, c/o CCCIG, P.O Box 5260, DUNEDIN. These must be completed and returned for approval before access to the system is permitted - at the time of writting, no charges are being made for the BB service.

The latest development in this area is a COMPUTER EXPO planned for Sunday September the 7th. It is to be a "show and tell" type show aimed at the Home User to let people see what the lower priced Micros are used for. The various User Groups in the area are setting it up, each with a Machine or two on show ; We hope to get an Electron, a BBC or two, and a Master, all set up with demos of interest. Some small-business machines from retail outlets will be present, but the idea is to show rather than sell. This is a new idea in this area so we all have our fingers crossed.

I shall try and get a note to Beeblet before Christmas to report on results. Well, we have been slow to go but we have a number interested in "show and tell" type nights so hang in and help - with practice we can only get better.

BUY - SELL - EXCHANGE.

Dunedin Area Sept.'86.

For Sale:

BBC 'B' +DFS(0.9) 1.2 OS Basic 1. PRICE $1500.00 ono
Complete with 5 1/4 400K (DS/80t) Mitsubishi Disc Drive.
32K Solidisc//Aries B12 and Aries B20 Boards. View, ADE, and DiscDoctor ROMS.
Disc Utilities, View Printer Driver, and Mixed programmes on Disc.

ELECTRON PRICE $400.00 ono
Near new Machine, Program tapes, and Books. Welcome Package and extra Books and tapes included.

PRINTER SEIKOSHA GP80 PRICE $200.00 ono
Also Near New but Hardly Used as well.

32K SWR PRICE $200.00 ono

SPEECH SYNTHESISER PRICE Offers.
Plug in Board - not Acorn system - works well.

DATA TAPE RECORDER PRICE $50.00 ono
As New as owner started with Discs.
Complete with Cable for BBC.

MODEM (Acoustic Connect) PRICE $60.00 ono
Built from a Kit and works well. Owner supports a UG direct connect Modem now.

ROMSMASTERFILE I and SPELLCHECK I PRICE Offers.
Original ROMs with Manuals etc. Owner upgrading or M/C change.

BETA-BASE Clares Data-Base80t Disc PRICE $50.00 ono
STILL NEW - More power than I have application.

BEYOND BASIC Book and Tape PRICE $40.00 ono
(6502 Assembly Language Programming)
NEW. Looked at but no application or interest.

MAKING THE MOST OF THE MICRO Book and Tape PRICE: $40.00 ono
STILL NEW - A very good combination for someone with the applications.

To Buy:

SIDEWAYS RAM 32K and up considered - Sizes and prices please.

To Exchange:

80t DISC SOFTWARE Debugged Public Domain.
Games and Application utilities - any offers.

from page 30

```
 100 REM Menu program
 105 *FX 15,1
 110 ON ERROR GOTO 5020
 200 READ TITLE$
 300 DIM F$(20),N$(20),D$(20)
 400 I=0
 500 REPEAT
 600   I=I+1
 700   READ F$(I),N$(I),D$(I)
 800   UNTIL F$(I)="DONE"
 850 MAX=I-1
 900 MODE 7
1000 PROCCENTRE(TITLE$)
1100 FOR J=1 TO MAX
1150   IF MAX<10 THEN PRINT
1160   letter$=CHR$(64+J)+"."
1170   colour$=CHR$(129+(J-1)MOD 6)
1200   PRINT letter$;colour$;N$(J);TAB(18);"- ";D$(J)
1300   NEXT
1350 VDU 28,0,24,39,VPOS
1400 PRINT'"Enter the letter of your choice ";
1405 REPEAT
1410   A=GET
1415   PRINT CHR$(A)
1420   REQ=A-64
1430   IF REQ>0 AND REQ<=MAX THEN CHAIN F$(A-64)
1500   PRINT"Select a letter from A to ";CHR$(MAX+64);" ";
1505   UNTIL FALSE
1510 END
1520
1600 DEF PROCCENTRE(T$)
1605 PRINT'
1610 L%=LEN(T$)/2
1620 FOR Y=1 TO 2
1630   PRINT CHR$141;CHR$134;TAB(20-L%);T$
1640   NEXT
1650 ENDPROC
1700 REM Enter the title of disc here
1750 DATA BEGINNERS' COLUMN
1760
1790 REM Filename,Game-title,Description
1900 DATA FILE,Title,Details
3500 DATA DONE,DONE,DONE
5000
5010 REM Error routine
5020 REPORT
5025 IF ERR<200 PRINT ERL:END
5030 PRINT"  ( ";F$(A-64);" )"
5035 X=INKEY(500)
5040 RUN
5050 END
```

DFS MADE EASY

Bernie K, Wgtn

This article is intended to unravel some of the complexity of DFS commands for those who don't need a highly technical explanation. It arises out of a question asked at a recent Wellington User Group Meeting.

The DFS commands can be arranged into 3 functional groups :

1. LOAD and SAVE
2. *LOAD and *SAVE
3. *RUN and CHAIN

The first group is the simplest one which will load and save programs without the user having to supply anything other than the program name.IE LOAD"GAME", SAVE"MYPROGRAM". Why then do we need to worry about anything more complicated than that ? The answer is that these commands assume that :

a. The program is written in BASIC
b. It is located in the normal BASIC program space.

If we wish to do something where these conditions are not met, a more complex command is needed. One which will tell the computer where in memory to find the program, where to load it, and its execution address. The execution address tells the computer where to go after the program is loaded. Either into BASIC to await a command from the keyboard or where to go to commence running the program.

While the reader may not need to save other than BASIC programs, occasions could arise where it is necessary to have more than one BASIC program in the computer at the same time. Seeing as they cannot all reside in the normal program space, some must be loaded to different places in memory.To do this it is necessary to use the *SAVE and *LOAD commands as these will allow you to specify the load and execution addresses.

Perhaps the best way to understand this is to go through an example of taking a program in memory and *SAVE-ing it and then *LOAD-ing it.To fully understand this you will need some knowledge of the computers memory map. While memory locations are normally refered tousing HEX numbers a full understanding of these is not really necessary. Memory from HEX 0000 to HEX 1900 is normally used by the machine operating system and is not available to the casual user. BASIC programs normally start at &(HEX) 1900 and extend upward according to their length. Memory used to store the screen image extends downwards from & 8000 to an extent which varies according to which graphics mode you are using. For mode 7 it would be & 7C00.

Let us assume that a program is currently in memory starting at & 1900 and ending at & 2900. However when we next load it we wish it to start at &4000 and end at & 5000, that will then allow us to load another program in between & 1900 and &4000. The *SAVE command has the following format :

```
*SAVE "filename" SSSS EEEE XXXX LLLL
```

where SSSS is the program start address
EEEE is the program end address
XXXX is the execution address
and LLLL is the address to which it should be loaded.

To achieve what we want we would enter the command

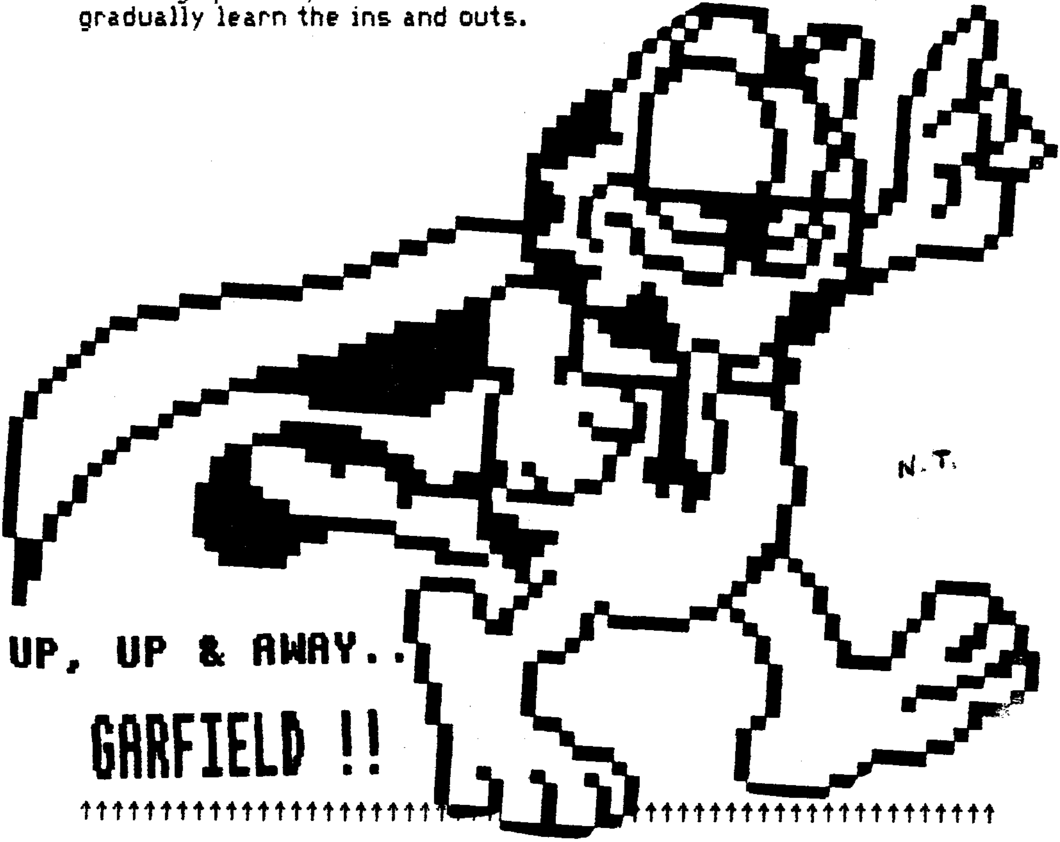
```
*SAVE "program" 1900 2900 0000 4000
```

This would mean that when the program is loaded using a *LOAD command it would load into memory commencing at &4000. Let us now assume that we wish to change the address to which it loads to &5000 because the program starting at &1900 needs more room. One way is to load the program using command *LOAD 5000. This will overide the original load address which was saved when the program was saved. However if we wish the program to load to &5000 every time we load it, it would be better to *SAVE it again but this time using the new load address. In order to run the program it would be necessary to set the variable 'PAGE' to &5000 type 'OLD' and then 'RUN'.

To load in the second program it would be necessary to reset PAGE to &1900 and then load the program using just LOAD "filename". It is necessary to reset PAGE because PAGE defines where 'normal' BASIC program space begins, and the LOAD command always loads the program to the address stored in PAGE. Of course the same thing could be achieved by using *LOAD 1900, although PAGE would still have to be reset to &1900 before the program could be run.

The third pair of commands combine the flexibility of the *LOAD with the simplicity of use of the LOAD command. They make it possible to load a complex sequence of programs using only a single simple command. There has to be a catch somewhere. The complexity is not really avoided it is just concealed from the user, by writing into the program *LOAD commands which will be executed when the program is run, causing the subsequent program sections to be loaded to the addresses specified.CHAIN will allow a sequence of BASIC programs to be loaded and immediately RUN, and *RUN will do the same thing for machine code programs.

So in simple terms if all that you wish to do is load and save single simple programs written in BASIC the commands LOAD and SAVE are all you need. If you are dealing with commercially written software there is a good chance it will respond to either CHAIN "filename" or *RUN "filename". If none of the foregoing works then you must resort to *LOAD and *SAVE.
While a more comprehensive explanation of how use *LOAD and *SAVE than that given here would be necessary to enable the non-expert user to cope with all eventualities,it is not beyond most peoples capacity to learn. I hope that using this as a starting point you will be able to use the 'User Guide' to gradually learn the ins and outs.


N.T.
UP, UP & AWAY..
GARFIELD !!

JOTTINGS

This Newsletter is something of a mixed bag: a SCOOP (!?) in the form of an early review of the new Acorn machine from Acorn User's Technical Editor; the first of a series of articles reproduced with the kind permission of BEEBUG; some homegrown learners series starting up. I hope you enjoy it - its my last one. I hear Joe Joyce has left Barsons....

.....and in with the new

A new editorial committee / workshop takes over next month - wish them luck - they'll need it! This editor is going in for a refit....

```
                ********************************
    10  REM Consider the following
    20  T%=TIME
    30  FOR N%=1 TO 1000
    40    IF N%=500 THEN PRINT "GOT IT!!"
    50    NEXT N%
    60  PRINT"FIRST ONE TOOK "(TIME-T%)/100 " SECS"
    70
    80  REM **********    SECOND APPROACH
    90
   100  PRINT
   110  T%=TIME:DONE=FALSE
   120  N%=0
   130  REPEAT
   140    N%=N%+1
   150    IF N%=500 THEN PRINT "GOT IT!!":DONE=TRUE
   160    UNTIL DONE
   170 PRINT "SECOND ONE TOOK "(TIME-T%)/100 " SECS"
>RUN
GOT IT!
FIRST ONE TOOK  1.15 SECS
GOT IT!!
SECOND ONE TOOK  1.17 SECS
```

The programs are useless but the benchmark?? aspects appear to be fair in that the first seeks the mid-point of a sequence. Theoretically the second is optimised so that once the objective is achieved the program terminates. In reality the REPEAT-UNTIL loop is so comparatively slow that the FOR-NEXT loop terminates first.

For the vulgar try:-

```
 30 IF N%=500 THEN PRINT (etc.):N%=1000
```

Would presumably give the quickest results of all.

Is the BEEB encouraging me to go astray?. - Jeff Hunt.

SERVICE AGENTS AND DEALERS

The NZ network of service and dealers for the BBC are as follows:

AUCKLAND:

Sales and Servicing-
Barson Computers NZ Ltd, ph. 504-049
1 Ngaire Avenue, 504-631
Auckland .3.

John Gilbert Electronics, ph. 390-839
75 Parnel Rise,
Parnell.

Other Dealers-
Computer Terminal, ph. 419-053
Hinemoa St

Neil Gladden,
Data Base Services,
8 Kowhatu Rd

Whitcoulls Ltd -
186 Queen St ph. 778-329
312 Broadway,Newmarket ph. 543-129

BLENHEIM

Whitcoulls Ltd, ph. 88-039
30 Market Street North

CHRISTCHURCH:

Sales and Servicing-
Aftron Computers Ltd ph. 797-445
161 Barbados St.

Dealers-
TVNZ Enterprises Shop,
P.O. Box 1945

Whitcoulls Ltd-
111 Cashel St ph. 794-580
Canterbury Centre, High St ph. 50-159
201 Manchester St, ph. 787-561

DUNEDIN:

Whitcoulls Ltd, ph. 774-120
143 George St.

HAMILTON

Whitcoulls Ltd. ph. 82-174
175 Victoria St.

INVERCARGILL

Whitcoulls Ltd, ph. 86-063
66 Dee St.

SOUTHLAND

Lyndon McEntee, ph. 7365
Educomp,
P.O. Box 255,
Gore.

TARANAKI

Winston Electronics ph. 298 7769
26 Berwyn Ave.

TAURANGA:

Sales and Servicing-
Graham Cheer

Whitcoulls Ltd ph. 87-738
97 Grey St

TE PUKI

May & Associates ph. 83-257
P.O.Box 345.

TIMARU

Whitcoulls Ltd. ph. 88-185
182 Stafford St,
Timaru

WANGANUI

Whitcoulls Ltd, ph. 54-193
148 Victoria Ave

WELLINGTON:

Servicing-
APTEC
(Applied Engineering and Technology)
3 Halleys Lane ph. 850-811
850-800

Dealers-
Whitcoulls Ltd,
312 Lampton Quay ph. 721-921

Neville Hudson,
249 Darlington Road, Mirimar Ph. 882-444

USER GROUP MEETINGS

AUCKLAND: -? PLEASE ADVISE
-North Shore: meets last Wednesday of the month, 7.30pm, Salvation Army Hall, Glenfield Road, Glenfield ph Chris 419-0543 (wk)
CHRISTCHURCH: -fortnightly workshops, Monday 6.30pm at Hagley High School. ph. Michael 582-267.
DUNEDIN: -first Thursday of the month. Phone Martin McDowall 42-031
HAWKES BAY: -Alternative months Hastings & Napier. Contact Kendall Napier 435-624, Bob Taradale 446-955, Mitch Hastings 778-235.
INVERCARGILL: -Phone Evan 330-444 Invercargill.
PALMERSTON NORTH: -Phone Tom Skinner 83-009(wk)
ROTORUA: -Phone Ian 85-583 or Joan 81-536 (independent group)
TAUPO: -meets every second Wednesday @ 7pm. Contact David 84-215 (h), 85-124 (wk).
TAURANGA: -every second Wednesday. ph. Chris & Jane 65-076.
TIMARU: -Phone Lloyd van der Krogt Timaru 61-412.
TOKOROA: -1st Friday of month, 7.30pm, Tokoroa High School. Contacts Don Fraser, 68-813 or Graeme Robertson, 65-346 Tokoroa.
WAIKATO: -first Monday of the month 7.30pm Waikato Tech Institute. Ph. Alison or John, Morrinsville 6695.
WELLINGTON: -meets usually second WEDNESDAY of the month, 7.30pm, Royal Society Lecture Theatre, Turnbull St, Thorndon. Other dates advised in Beeblet regional news.(May p.39)
-Workshops: fourth Wednesday of month, other venues. ph. Don 848-235 or Mike 785-437.
OTHER CENTRES: - let us know and we will publish details here.

THE NEWSLETTER:

CONTRIBUTIONS:-most welcome. Listings should be sent in on tape or disc. (Tape - 2 copies, one at 300 baud please). Please include written explanation of listing; text and graphics only material welcome too.

DEADLINES:- For a particular issue, the last day for material is the last day of the month prior to publication.

ADVERTISING:- Rates are $20 per half page (camera ready), deadline as above.

Copyright (c) **BBC/ACORN COMPUTER USER GROUP OF NZ INC.** Published monthly except January and mailed to financial members. Registered Publication with NZPO

MEMBERSHIP:

Membership of the users group is on payment of an annual subscription from April to March. For the 1986/7 year it is: $30.00, plus $5.00 for Wellington members as a local branch levy, which entitles attendance at meetings as detailed above. Joining or renewing members get all the back issues of the current year - those joining from 1 October may have half the annual sub waived and only receive newsletters from 1 October.

THE BBC/ACORN COMPUTER USER GROUP OF NZ INC, P.O.Box 9592, WELLINGTON.

Reproduced by BRYCE FRANCIS LTD ,WELLINGTON